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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,261	03/12/2004	Kazumasa Kobayashi	826.1939	5852

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EXAMINER

PARIHAR, SUCHIN

ART UNIT	PAPER NUMBER
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2825

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/798,261

Applicant(s)

KOBAYASHI, KAZUMASA

Examiner

Suchin Parihar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 3/12/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 5/25/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to application 10/798,261, filed on 3/12/2004. Claims 1-17 are pending in this application.

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. There are many electronic circuit design apparatus' and methods; title should reflect the one to which the claims are directed.

Claim Objections

2. Claim 9 is objected to because of the following informalities: the preamble of claim 9, as it reads, fails to provide a useful concrete and tangible result stemming from the claim output. In order to avoid a possible 35 USC 101 claim rejection, Examiner suggests the following change be made to the preamble of claim 9. The preamble should read: --A computer-readable storage medium storing a program which, when executed by a computer, designs an electronic circuit on a screen, the executing program causes the computer to perform:--. Appropriate correction is required.

3. Claims 10-16 are objected to because of the following informalities: With respect to the preamble of claim 10, the following change should be made: --The computer-readable storage medium of claim 10, wherein the executing program causes the computer to further perform:--. The preambles of claims 11-16 should be amended similarly. Appropriate correction is required.

Claim R jections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-4, 6, 8-12, 14, 16 and 17 are rejected under 35 U.S.C. 102(b)** as being anticipated by Kikuchi et al. (6,385,758).

6. With respect to claim 1, Kikuchi teaches: a storage device to store contour information about each component (i.e. component contour data is used by layout data converter 111 of Figure 3, wherein the contour data originates from the layout data memory unit 20 of Figure 3, Col 8, lines 1-7); an indication device to indicate a plurality of components to be collectively arranged (i.e. to place or arrange the parts or components, Col 2, lines 45-50) in the electronic circuit and a layout distance between two of the plurality of components (i.e. a positional relationship between components determines a moving distance, Col 4, lines 50-55); a calculation device to obtain contour information about the plurality of components from the storage device (i.e. layout data memory 20 of Figure 3) and to calculate a contour of a component region for collectively arranging the plurality of components (i.e. component contours are arranged, Col 8, lines 4-6) using the obtained contour information and the indicated layout distance (i.e. a positional relationship between components determines a moving distance, Col 4, lines 50-55); and a display device to display the calculated contour of the component

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region on the screen (i.e. layout result display unit 780 may comprise a CRT display, Col 13, lines 55-60).⁷

7. With respect to claims 9 and 17, Kikuchi teaches: indicating a plurality of components to be collectively arranged (i.e. to place or arrange the parts or components, Col 2, lines 45-50) in the electronic circuit and a layout distance between two of the plurality of components (i.e. a positional relationship between components determines a moving distance, Col 4, lines 50-55); calculating a contour of a component region for collectively arranging the plurality of components (i.e. component contours are arranged, Col 8, lines 4-6) using contour information about the plurality of components and the indicated layout distance (i.e. a positional relationship between components determines a moving distance, Col 4, lines 50-55); and displaying the calculated contour of the component region on the screen (i.e. layout result display unit 780 may comprise a CRT display, Col 13, lines 55-60).

8. With respect to claims 2 and 10, Kikuchi teaches all the elements of claims 1 and 9, from which the claims depend respectively. Kikuchi teaches: the indication device indicates a component region to be transformed (i.e. arrangement of the components is uniformly compacted, Col 5, lines 19-25); the calculation device transforms the indicated component region (i.e. compaction is carried out, Col 5, lines 19-25); and the display device displays a transformed component region (i.e. layout result display unit 780).

9. With respect to claims 3 and 11, Kikuchi teaches all the elements of claims 1 and 9, from which the claims depend respectively. Kikuchi teaches: the indication device indicates a component region to which attribute information is set (each pair of adjacent

components in the layout has constraint data assigned to the pair, Col 5, lines 1-13); and the calculation device sets attribute information about each component included in the indicated component region (i.e. a movable distance for each component is assigned).

10. With respect to claims 4 and 12, Kikuchi teaches all the elements of claims 1 and 9, from which the claims depend respectively. Kikuchi teaches: the indication device indicates a plurality of components that are separately arranged in the electronic circuit (i.e. place or arrange parts or components in the layout, Col 2, lines 45-50); and the display device collectively displays the indicated plurality of components as a component region (i.e. layout result display unit 780, Col 13, lines 55-60).

11. With respect to claims 6 and 14, Kikuchi teaches all the elements of claims 1 and 9, from which the claims depend respectively. Kikuchi teaches: the indication device indicates a component region to be divided (i.e. a pattern division section for dividing a pattern into a plurality of partial areas, Col 3, lines 43-47); and the calculation device divides the indicated component region into a plurality of component regions (i.e. a pattern division section for dividing a pattern into a plurality of partial areas, Col 3, lines 43-47); and the display device displays the plurality of component regions (i.e. layout result display unit 780, Col 13, lines 55-60).

12. With respect to claims 8 and 16, Kikuchi teaches all the elements of claims 1 and 9, from which the claims depend respectively. Kikuchi teaches: the indication device indicates a reference component (i.e. terminal constraint graph prepares a pair of configurations, Col 7, lines 18-23); and the calculation device calculates a contour of the

component (i.e. component contours are arranged, Col 8, lines 1-5) region in consideration of relative position relation (i.e. positional relationship between components, Col 4, lines 50-55) between the indicated reference component and the plurality of components.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. **Claims 5, 7, 13 and 15 are rejected under 35 U.S.C. 103(a)** as being unpatentable over Kikuchi et al. (6,385,758) in view of Aubel et al. (6,910,200).

15. With respect to claims 5 and 13, Kikuchi teaches all the elements of claims 1 and 9, from which the claims depend respectively. Kikuchi teaches: the indication device indicates a component region to be divided (i.e. pattern division section for dividing a substrate into a plurality of partial areas, Col 3, lines 43-47). Kikuchi fails to teach: the display device separately displays at least one indicated component from among a plurality of components included in the indicated component region and collectively displays remaining components as a component region. However, Aubel teaches: the display device separately displays at least one indicated component (i.e. placement tool may load a physical representation of the selected region or cell, Col 19, lines 55-60)

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from among a plurality of components included in the indicated component region (i.e. selected region, Col 19, line 48) and collectively displays remaining components (i.e. children of the selected region may be displayed, Col 19, line 50) as a component region. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Aubel into the invention of Kikuchi for the following reason(s): Aubel improves the invention of Kikuchi by providing a method to organize [or segregate] one or more cells or regions of a layout in order to improve (i.e. transform) the layout or design of each component.

16. With respect to claims 7 and 15, Kikuchi teaches all the elements of claims 1 and 9, from which the claims depend respectively. Kikuchi fails to teach: the indication device indicates a plurality of component regions to be integrated; the calculation device integrates the indicated plurality of component regions into one component region; and the display device displays the one component region. However, Aubel teaches: the indication device indicates a plurality of component regions to be integrated (i.e. designer may select an un-placed region or cell and integrate it into the second physical window, Col 19, lines 55-60); the calculation device integrates the indicated plurality of component regions into one component region (i.e. the placement tool may then move the region or cell from the first physical window to the second physical window, wherein said region or cell is integrated with other cells or regions [i.e. children] that pre-exist in the second physical window, Col 19, lines 45-65); and the display device displays the one component region (i.e. the second physical window displays the integrated one component region in the floor plan window, Col 19, lines 49-52).

Conclusion

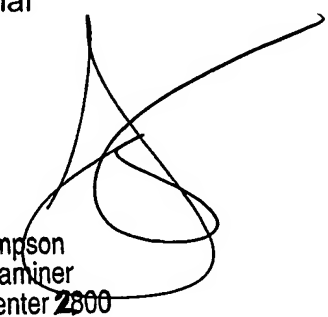
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suchin Parihar whose telephone number is 571-272-6210. The examiner can normally be reached on Mon-Fri, 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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